REMARKS

The drawing was objected to for being informal. A formal drawing is hereby submitted, and the Examiner's approval of same is respectfully requested.

The specification is amended herein to provide a status of the patent application mentioned at page 2 of the specification, as requested by the Examiner, and of the status of the patent application found in paragraph 17.

Claims 1-12 were rejected under 35 USC 102 as being anticipated by Schneck et al, US Patent No. 6,208,986. Applicants respectfully traverse.

Schneck et al describe an arrangement where different types of information requests are sent to an LDAP server over the Internet. At that remote server, the requested data is retrieved according to a template that is associated with the type of the request made, data is populated in the template, and forwarded via the Internet to the requester.

In contradistinction, applicants claims are directed a method for managing a network directory **cache**, which by its nature is a storage mean that is <u>other than</u> the main storage means of the information under consideration. In the case of claim 1 this is "network directory" information, and in the case of he Schneck et al reference, this is the LDAP information.

In the computer networking arts, a cache is a memory that contains only <u>some</u> of the information that is otherwise contained in another memory that is remote from the cache memory. By judiciously selecting the information that is to be maintained in the cache, various benefits accrue. Also, as stated in paragraph 3 of the specification, it is desirable to cache information close to the client applications that access the remote server's information. In other words, the kind of cache that is addressed in the specification is one that is remote from the main storage means of the information (and preferably close to the client unit that makes the information requests.

A method for managing a network directory cache, which is what claim 1 is about, is thus, a method for managing the information that is maintained in a location that is remote from the location that maintains the full complement of the information.

The arrangement described by Schneck et al, in contradistinction, does not relate to cache memories, or to caching in any form. All that it relates to is the manner of

retrieval of information by a server that is coupled to the Internet -- from the database that is within the server -- and the manner of presenting of the retrieval results to a remote user, over the Internet. Applicants respectfully submit that since independent claims 1, 5 and 8 are all directed to "managing a network cache," whereas in contradistinction, the arrangement described by Schneck et al is directed to the manner of retrieving information at a remote server and presenting this information to the information requester, it follows that all of the claims are not anticipated by Schneck et al.

In addition to the "broad-brush" traversal of the claims' rejection, which demonstrates that all of the claims are not anticipated by the Schenck et al reference, each of the claims contains additional limitations that make each of the claims neither anticipated nor rendered obvious by Schneck et al.

Addressing the specific limitations of claim 1, in support of the rejection the Examiner cites col. 2, lines 52-53, lines 53-57, and lines 38-57. Since the last-cited passage encompasses the first two, it suffices to assess the teachings contained only the last-cited passage; that is, the teachings at col. 2, lines 37-57 (extending the Examiner's citation to include a whole sentence). This passage states:

> Another technical advantage is that the invention provides an administrator with the ability to create custom directory information search forms.
> According to one embodiment of the present invention, these and other objects and technical advantages of the invention are achieved by providing a Web interface and method for displaying directory information. The Web interface for displaying directory information comprises a server for receiving a directory request, a request processor operatively connected to the server, wherein the request processor links directory data to a template file in response to the directory request, wherein the template file dynamically creates a response to the directory request, and a publisher for publishing the response.
> In another embodiment, a method for displaying directory information in accordance with the invention comprises the following steps: (1) receiving at least one information request; (2) retrieving data from a directory responding to the information request; (3) correlating the data with a template file to create a response, the template file comprising tags for controlling display of the data; and (4) publishing the response.

It is respectfully submitted that this passage teaches that the administrator of the disclosed system for providing directory information over the world-wide-web can create *custom* directory information search forms. This overcomes the asserted deficiency in

prior art systems where, according the Schneck et al, neither the format in which the information is published nor the particular contents of the information is customizable once a particular protocol is selected for interacting with a particular database (col. 1, lines 52-54). The customizable end result that is desired by Schneck et al is achieved by having a template in the server, the template is selected based on the presented information query, and it is the template that is applied as the database query that creates a response that is presented to the requesting party. In a real sense, therefore, the template controls what information is retrieved from the database that is responsive to the directory request. Different templates thus create a different output. For the world-wide-web environment, the template file comprises tags for controlling the display of the data, which is a conventional html type of Internet interface. In the context of the Schneck et al disclosure, a template is the vehicle for collecting the combination of the data that is displayed and the formatting of the displayed data that is presented to the requester. One type of query engenders one kind of data display, while another type of query engenders another kind of data display.

Relative to the limitations of claim 1, the Examiner first asserts that the passage teaches receiving and storing a plurality of user queries (first clause of the claim). Applicants respectfully disagree. This passage teaches receiving a query, or "at least one information request," and one can extend the teaching to receiving a *plurality* of user queries, but there is no teaching whatsoever of any storing of user queries. Given the objects of the Schneck et al system to deliver information based on customized templates, there is no benefit for storing user queries once they are responded to.

Next, the Examiner asserts that this passage teaches "'creating a template that generalizes the user queries' as a means for creating a template base on the query requested," which relates to the second clause of the claim. Applicants respectfully disagree. The phrase quoted by the Examiner means that, at least in some sense, a plurality of queries lead to a template (in the singular) that is generated so as to generalize the user queries. In other words, the template that is generated is one that encompasses, or subsumes, the plurality of queries. It is respectfully submitted that the passage cited by the Examiner teaches no such concept. The passage cited by the Examiner does not teach generating a template. The passage cited by the Examiner does

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not teach generating a template based on any query, or on a plurality of queries. The passage cited by the Examiner does not teach generating a template so as to generalize the received and stored user queries. Indeed, the action occurring in the Schneck et al server is, effectively, the reverse of what occurs in the claim 1 method. That is, whereas claim 1 specifies creating a template that has a certain characteristic that is based on a set of received and stored user queries, in the Schneck et al system a pre-customized template is used, and information from a database is retrieved based on the template. The only thing the is *created* in the cited passage is the response to the query, which response is based on the existing template.

Lastly, the Examiner asserts that the cited passage teaches "receiving directory entries..." (the last clause of the claim). Since the issue at hand is one of anticipation, it is assumed that the Examiner intended to quote the last clause of claim 1, although -- probably through error -- employed the word "receiving" (first word) instead of "retrieving." Regardless, applicants respectfully disagree. The directory entries that are retrieved in Schneck et al are not in response to "the query" that was generalized by past user queries. To give an example, if one query asked for information on persons named "Adam," and another query asked for information on persons named "Able," a template that generalizes the two past (stored) queries can be created, and that template would be one that asks for information on persons whose name begins with "A." Nothing like this is described or suggested by anything that is found in the cited passage in Schneck et al, or anywhere else in the reference.

The Examiner cites col. 4, lines 10-25. This passage, which states:

> FIG. 2 illustrates the topology of a preferred embodiment of Web to X.500 gateway 100. The Web to X.500 gateway 100 includes a server (such as a Web server) 200, which accepts requests for directory information; request processor 202, which responds to the requests; map 212, which correlates the requests to template files (i.e., request mapping) and correlates abbreviated names to unabbreviated names (i.e., friendly name mapping); and template files 214, which contain templates that dynamically control the publishing of the requested directory information. A user may access the server 200 liW via Web Browser 108 through Sockets Application Programming Interface (Sockets API) 204. Additionally, an administrator controls and configures the server 200 via Server Control and Configuration system 218.

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According to applicants' understanding, this passage merely teaches that the server contains a collection of template files, and based on the type of information request that is received from a user via a browser, a particular template is selected. It also teaches that an administrator controls and configures the server. It does not teach or suggest that a template file is dynamically created based on past data (stored queries), and it certainly does not teach or suggest that "a template file is dynamically created a response to the directory request and publishing the response and store the results in created customer directory information" as asserted by the Examiner.

In conclusion, it is respectfully submitted that claim 1 is neither anticipated nor rendered obvious by the Schneck et al reference. It follows that dependent claims 2-4 are also not anticipated or rendered obvious by Schneck et al. Additionally, applicants respectfully submit that claims 2-4 contain limitations that independently make the claims patentable.

Regarding claim 2, the Examiner asserts that col. 4, line 25 through col. 15, line 65 -- which effectively is the entirety of the Schneck et al Detailed Description -- teach the notion that "directory entries are retrieved after estimating the benefits of storing directory entries in the cache." Applicants respectfully disagree. The reference teaches retrieving directory entries, but it does not teach

- having a cache,
- storing entries in a cache,
- the notion of benefits for storing information in a cache, or
- the notion of estimating those benefits when information is stored, or is considered to
  be stored.

As commonly occurring as the word "cache" ought to be when disclosing the management of caches, the word "cache" does not appear even once in the entirety of the passage cited by the Examiner, and nowhere else in the reference. The word "benefit" also does not appear anywhere in the reference, and neither does the word "estimate." Accordingly, applicants respectfully submit that the reference does not teach the limitations of claim 2 and that, therefore, claim 2 is not anticipated or rendered obvious by the reference.

Regarding claim 3, the Examiner asserts that the claim 3 limitation is also taught

in the aforementioned passage. Applicants respectfully disagree. The only modification that is discussed in the reference is a modification of a particular search, primarily in consequence of the fact that a particular information request is mapped to a particular template, and satisfying the need for information to populate the template leads to a an effective modification of the request. The important point to note here is that the effective modification is only a mapping of the presented query to a template file. It certainly is not a modification of the template itself. In contradistinction, applicants' claim 3 specifies that the template is modified, and further that the template is "stored and modified <u>as new user queries are received</u>" (emphasis supplied). Therefore, applicants respectfully submit that claim 3 is neither anticipated nor rendered obvious by the Schneck et al reference.

Regarding claim 4, the Examiner asserts that col. 2, lines 17-25 teach the claim's limitation. While it is true that the database discussed in the reference utilizes the LDAP, it is not true that the discussion relates to a *cache*. Rather, it relates to a LDAP *directory server*, and as discussed above, the claimed invention is not directed to the server that contains all of the information that can possibly be accessed, but rather to a cache that maintains only a subset of the information.

Regarding claim 5, the Examiner asserts that the reference teaches maintaining a plurality of candidate templates, teaches storing user queries, and teaches generating a plurality of new candidate templates that generalize the candidate templates with the user query. Applicants respectfully disagree. First, although it is true that the reference teaches the storage of a plurality of templates, they are not *candidate* templates. The term candidate must be attributed some meaning, and in the context of applicants' disclosure, the adjective "candidate" means that the template may not be preordained or fixed but, rather, can be modified. The passage cited by the Examiner does not teach candidate templates, because the LDAP server's administrator presets them. Hence, the first clause of the claim is not taught by the reference. Second, the notion of storing queries is not described in the reference (discussed above) and, therefore, the second clause of the claim is not found in the reference. Third, the notion of generating new candidate templates is also not described or suggested by the reference. The only thing that is "generated," in the passages cited by the Examiner, or elsewhere in the reference,

is the results that are responsive to queries applied to the LDAP information store (the server) by means of the template. Fourth, the notion that candidate templates may be modified by generalizing those candidates based on a user query, thereby forming new candidate templates, is also not described or suggested by the reference. It should be noted that the notion of generalizing that is present in the last clause of claim 5 is one where the templates are generalized. In Schneck et al, in contradistinction, the most that can be said is that the template – by its nature, and not by any redesign of the template in response to past queries – generalizes a query, in the sense that one particular template might be selected by the server's administrator to be responsive to a number of slightly different queries, and therefore more than one type of query maps to the same template. But of course, generalizing a query is not the same as generalizing a template.

In conclusion, it is respectfully submitted that none of the claim 5 limitations are found in the reference and, therefore, it is respectfully submitted that claim 5 is neither anticipated nor rendered obvious by the Schneck et al reference. Dependent claim 6 is believed patentable for the same reasons set forth in claim 2, and dependent claim 7 is believed patentable for the same reasons set forth in connection with claim 4.

Claim 8 is an independent claim, but it contains limitations that, as discussed above, are not found in the reference. Specifically, claim 8 relates to caches, claim 8 contains the notion of maintaining *candidate* templates, claim 8 contains the notion of *benefit* of caching, and claim 8 contains the notion *estimating* the benefit.

Additionally, claim 8 specifies "selecting a candidate template based on its benefits estimate...." Again the Examiner cites col. 2, lines 52-57, and col. 4 lines 25 through col. 15, line 65. Applicants respectfully submit, however, that the cited passages describe retrieving directory entries in response to a query controlled by a template, but do not describe candidate templates, and certainly do not describe candidate templates that are selected based on a benefit that is estimated as part of the method.

Though the Examiner did not asserts it explicitly, it is possible that the Examiner believes that the Schneck et al templates are preselected by the server's administrator to provide a benefit. One might hope that to be the case, but that is not described in the reference. More importantly, the selection of templates in the course of the method described by Schneck et al is preordained, and is NOT based on any evaluated estimate of

a benefit.

Based on the above, applicants respectfully submit that claim 8 is not anticipated or rendered obvious by the Schneck et al reference, and that claims 9-12, which depend on claim 8, are also not anticipated or rendered obvious by the Schneck et al reference. Additionally, it is believed that these dependent claims contain limitations that make the independently patentable over the reference.

Claim 9 specifies that the old cache entries are replaced by the entries that are retrieved. The Examiner again cites col. 2, lines 52-57, and col. 4 lines 25 through col. 15, line 65. Again applicants disagree that the cited passages teach the subject limitation. The notion of replacing previously stored entries with a newly retrieved set of entries is not found in either the cited passages or anywhere else in the reference. Since the reference does not deal with a cache at all, the notion of replacing entries should not even come up.

Claim 10 depends on claim 9, and it introduces the notion of replacing one set of entries that is present in a cache with a new set of entries only if the estimated benefit is greater that an estimate of benefits of the existing stored entries. This notion is not present in the cited references.

Claim 11 depends on claim 10, and it specifies additional limitations that, in applicants' view, are not present in the cited references.

Claim 12 is believed patentable for the same reasons that were presented in connection with claim 4.

It is noted that in connection with numerous claims the Examiner cited effectively the entirety of the Detailed Description section. While this is not improper, it does make it very difficult to know precisely what the Examiner is referring to. To illustrate, if the Examiner truly believes that some sentence, or a few sentences, describe, or at least mention the notion of replacing entries in a cache with other entries in a cache, it would be helpful to cite that sentence or sentences, rather than to cite more than 10 columns of text. One might even say that it was not necessity that required such a broad brush citation (over 10 columns of text) in order to demonstrate the presence of a particular notion in the text.

Therefore, it is respectfully submitted that if the Examiner disagrees with

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applicants' arguments above, at least in connection with those claims that the Examiner cited col. 4 line 25 through col. 15 line 65, the Examiner is respectfully requested to present a more focused citation, and to give applicants the opportunity to respond and have the responsive amendment entered <u>as a matter of right</u>.
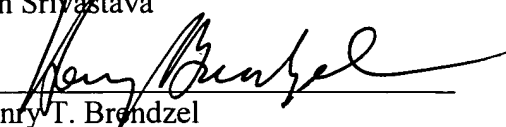
In light of the above amendments and remarks, applicants respectfully submit that all of the Examiner's objections and rejections have been overcome. Reconsideration and allowance are respectfully solicited.

Respectfully,
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Dated: 9/3/03

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